May 30, 2008

Certified Mail 7006 2150 0005 6143 2198

Mr. Walter E. Andrews, Chief
Water Programs Branch
US Environmental Protection Agency (USEPA)
290 Broadway- 21st Floor
New York 10007-1866

08 MAY 29 AM 10: 08

Dear Mr. Andrews:

PILOT BIOFOULING TEST RESULTS AGUIRRE PLANT
Toxicity Test Results NPDES PR0001031

On May 19, 2006 Puerto Rico Electric Power Authority (PREPA) submitted a letter to USEPA with the intention to conduct a pilot test for the use of a new chemical Spectrus CT 1300 to control biofouling in the once through cooling system. On March 26, 2008, PREPA received the authorization to conduct a 90 days pilot test with Spectrus CT 1300. PREPA started this pilot test in February 12, 2008.

PREPA hereby submits the results of the second toxicity test for the use of chemicals to control biofouling in the cooling system at Aguirre Power Plant. All the toxicity test samples performed successfully passed and the expected operational results (improve condenser efficiency and economy) were achieved.

Therefore, PREPA formally requests to continue the use of the Spectrus CT 1300 (intermittent frequency) in order to control the biofouling in the cooling system at Aguirre Power Plant. Also, PREPA formally requests a pilot testing for the same purpose at San Juan Power Plant, using the Spectrus CT 1300, as was performed at the Aguirre Power Plant.

For additional information, please contact Mr. Ruperto Berríos Santos, Acting Manager of the Water Quality Department, at 787-289-4965.

Cordially

Jaime A. Plaza, Head
Environmental Protection and
Quality Assurance Division

RBS/mch

c Leonardo Rodríguez

CC Wanda E. Garcia Hernandez, Director, Water Quality Area, Environmental Quality Board

AA-00334

CN 078-04495
REV. 1/01

COMMONWEALTH OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY
SAN JUAN, PUERTO RICO

www.prepa.com

PO Box 364267
San Juan, Puerto Rico 00936-4267

May 30, 2008

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Mr. Walter E. Andrews, Chief
Water Programs Branch
US Environmental Protection Agency (USEPA)
290 Broadway- 21st Floor
New York 10007-1866

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Jaime A. Plaza, Head
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Quality Assurance Division

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CN 078-04495
REV. 02/07

COMMONWEALTH OF PUERTO RICO
PUERTO RICO ELECTRIC POWER AUTHORITY

SAN JUAN, PUERTO RICO

www.aeepr.com

GPO BOX 364267
SAN JUAN, PR 00936-4267

May 21, 2008

Jaime A. Plaza, Head
Environmental Protection and
Quality Assurance Division

Rafael Pérez Jiménez, Head
Aguirre Power Plant Division

PILOT BIOFOULING TEST RESULTS AGUIRRE PLANT

In compliance of the order received in March 07, 2007 PREPA Aguirre submit the results of the second toxicity test (April 28, 2008) for the use of chemicals to control biofouling in the cooling system.
See enclosed report.

NPDES parameter result during performance of the pilot plan test

Parameter	Monitoring Type	NPDES Permit Limit			
		001IN Water Intake	001A Condenser Outfall-Monitoring Point	001Out Water Outfall	NPDES Permit Limit
Acute Toxicity Test	Composite	N/A	Passing	N/A	Passing or Failure

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PUERTO RICO ELECTRIC POWER AUTHORITY
BIOFOULING PILOT TEST
PREPA PURCHASE ORDER O040416 -EMPAC 07-16495
AGUIRRE POWER PLANT-PR0001660

Parameter	Monitoring Type	April 1, 2008			April 15, 2008			NPDES Permit Limit
		001IN Water Intake	001A Condenser Outfall-Point	001Out Water Outfall	001IN Water Intake	001A Condenser Outfall-Point	001Out Water Outfall	
Aluminum	Grab	50.3	63.7	42.0	<5.0	<5.0	<5.0	Report p.p.b.
Chemical Oxygen Demand	Composite	231	159	171	241	197	200	Report p.p.b.
Chromium	Grab	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	300 p.p.b.
Copper	Grab	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	50 p.p.b.
Flow[1]	Estimate	651.6	651.6	639.6	651.6	651.6	639.6	Report MGD
Lead	Grab	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	15 p.p.b.
pH	Grab	8.3	8.2	8.2	8.2	8.2	8.2	(7.3-8.5) s.u.
Zinc	Grab	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50 p.p.b.
Spectrus CT 1300	Grab	0.0	0.0	0.0	0.0	0.0	0.0	Report p.p.m.
Aquamax DSL 9915[2]	Grab	N/A	0.90	N/A	N/A	0.99	N/A	Report p.p.m.
Foamtrol AF1440	Not use in this phase							

Note: 1. The flow estimate is based on the pump log as required in the Aguirre Power Complex NPDES Permit.
2. N/A=Not Apply.

ALCHEM LABORATORY
ALTOL CHEMICAL ENVIRONMENTAL LABORATORY, INC.

QSI ISO 9001 CERTIFIED COMPANY

May 19, 2008

Mr. Leonardo Rodrìguez
Puerto Rico Electric Power Authority
P O Box 137
Aguirre, Puerto Rico

Dear Mr. Rodrìguez:

Enclosed is the report submitted by Marinco Bioassay Laboratory, Inc with the results of the Toxicity Tests for the 001a Sea Water of the Aguirre Steam Plant.

The "Summary Pages" classify the test results as "**Passing**" based on estimated permit requirements.

Please contact ALCHEM for any additional information you may need.

Cordially yours,

Marìa del C Pagàn
Director of Laboratory

rgo

Enclosures

SABANETAS INDUSTRIAL PARK · PONCE · P.O. BOX 359 · MERCEDITA, PR 00715
TELS. (787) 848-6050 · (787) 848-6085 · (787) 848-6265 · FAX (787) 848-6299

SAMPLE IDENTIFICATION

Project: TOXICITY TEST - PREPA - Aguirre Steam Plant

Lab sample Number: 08-2797 **001 a Sea Water**
April 28, 2008 (0845 hrs)
Identified as MBL Project/Report ·080443

ALCHEM LABORATORY, INC.
ALTOL CHEMICAL ENVIRONMENTAL LABORATORY
SABANETAS INDUSTRIAL PARK - PONCE • P.O. BOX 359 • MERCEDITA, PR 00715
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CHAIN CUSTODY RECORD #37687

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FAX (787) 848-6299

ISO 9001

CUSTODY # _____

Customer Name: | Customer Signature:

Project:

Sample Type (No. of Cont.) Grab _____ Composite _____ Turn Around Time _____
Sample Matrix: Liquid _____ Solid _____ Sludge _____ Oil _____
Containers: Sterile _____ Plastic _____ Glass _____ Vials _____ Others _____
Preservative: (A) Ice (D) Na OH (G) Ascorbic Acid (J) Other
(B) H_2SO_4 (E) HCL (H) Zinc Acetate
(C) HNO_3 (F) Sodium Thiosulfate (I) FAS

Lab. Sample No.	Date	Time	Sample Description

___Acidity (A)	___Res. Chlorine (A)	___Sulfite (A)	___Gold (A)	___Zinc (A,C)
___Alkalinity (A)	___Hardness (A,C)	___Surfactant (A)	___Iron (A,C)	___Ignitability (A)
___Ammonia (A,B)	___Iodide (A)	___TKN (A,B)	___Lead (A,C)	___Corrosivity (A)
___Asbestos (A)	___Moisture (A)	___TOC (A,B)	___Manganese (A,C)	___Reactivity (A)
___Bicarbonate (A)	___Nitrate (A)	___Turbidity (A)	___Magnesium (A,C)	___Metals_TCLP (A)
___BOD-5 (A)	___Nitrite (A)	___Aluminum (A,C)	___Mercury (A,C)	___Volatiles_TCLP (A)
___Bromide (A)	___Nitrate & Nitrite (A)	___Antimonium (A,C)	___Molybdenum (A,C)	___Semi Volatiles_TCLP (A)
___Carbonate (A)	___Oil & Grease (A,B)	___Arsenic (A,C)	___Nickel (A,C)	___Pesticides_TCLP (A)
___Chloride (A)	___Ortho Phosphate (A)	___Barium (A,C)	___Potassium (A,C)	___Herbicides_TCLP (A)
___COD (A,B)	___Phenol (A,B,I)	___Beryllium (A,C)	___Selenium (A,C)	___Benzene_TCLP (A)
___Coliform (F/T) (A,F)	___Phosphorus Total (A,B)	___Bismuth (A,C)	___Silicon (A,C)	___BTEX (A,E)
___Color ADMI (A)	___Set. Solids mg/L (A)	___Boron (A,C)	___Silver (A,C)	___PCB'S (A)
___Color Pt-Co (A)	___Set. Solids ml/L (A)	___Cadmium (A,C)	___Sodium (A,C)	___TOX (A)
___Conductivity (A)	___Solids Total (A)	___Calcium (A,C)	___Strontium (A,C)	___TTO (A,E)
___Cyanide (A,D,G)	___Suspended Solids (A)	___Chromium (A,C)	___Thallium (A,C)	___Dioxin (A)
___Fluoride (A)	___Silica (A)	___Chromium VI (A,C)	___Tin (A,C)	___Other___
___pH (A)	___TDS (A)	___Cobalt (A,C)	___Titanium (A,C)	___TPH { Oil___ Diesel___ Gas___ }
___Temp. (A)	___Sulfate (A)	___Copper (A,C)	___Vanadium (A,C)	
___D.O. (A)	___Sulfide (D,H)		___Lithium (A,C)	

Comments: _____

Sample collected by: (Signature)	Relinquished by:	Date: Time:	Received by	Date: Time:	Relinquished by: Date: Time:
Received by:	**Date: Time:**	**Delivery To Lab. by:**	**Date: Time:**	**Received at Lab by**	**Date: Time:**

PROCEDURE NO: ALGAP008 All Analyses will be performed following EPA approved methods unless otherwise specified by the client.

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

Whole Effluent Toxicity Testing Summary Page

Client name: Alchem Laboratory, Inc. - Seawater 001-A

MBL Project/Report # 080443

080443-1	*Mysidopsis bahia*	LC50 > / = 100%*	LC50 = 100%	Passing*
080443-1	*Menidia beryllina*	LC50 > / = 100%*	LC50 = 100%	Passing*

Additional Testing Required: No

Comments:
* Permit requirements are an estimate. MBL was not provided with a copy of the permit.

QA/QC Officer/Reviewer: Signature

Date: 5/19/08

Effluent Toxicity Testing Report Form

1. All Chain-of-Custody Forms	X
2. Standard Reference Toxicant (SRT) Reports attached. 2 SRT Reports attached.	X
3. All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical and biological measurements)	X
4. All Result Calculations	X

Facility/ Industry/ Client Name and address: Alchem Laboratory, Inc. Sabanetas Industrial Park - Ponce P.O. Box 59 Mercedita, PR 00715

NPDES Number: N/A

County: N/A

Non-NPDES (1) N/A Yes

Project N/A

Dates Test(s) Conducted:

Start Date: 04/29/2008

End Date: 05/01/2008

Start Time: 1617 hrs.

Name, Address, & Phone Number of Consultant Company: Marinco Bioassay Laboratory, Inc. (MBL) 4589 Samuel Street Sarasota, Florida 34233 (941) 925-3594 Certification #E84191 Contact: Jason Weeks Laboratory Director

Name(s) of Person(s) Conducting Test(s):(Printed): Dubravka Mihajlovic, Smiljana Kerkez, Marlena Beck, and Sutanya Singivipulya

QA/QC Officer/Reviewer: Signature: [signature]

Date: 5/19/08

Laboratory Report #/ Project #: 080443

Sampler's Name: (Print) N/A

Routine Test X Additional N/A For failed routine test dated: N/A

1	04/28/2008 0845 hrs.	080443-1	Grab	6	<0.02	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------
--	------	------	------	---	------	------	------

Type of Refrigerant Used for Sample Transportation: X Wet Ice N/A Blue Ice N/A Other

Samples Aerated: Yes, to reduce supersaturated gases. Yes (Describe) N/A No

Sample Delivered By: N/A Bus N/A Hand X Common Carrier

Samples Filtered: N/A Yes (Describe) X No

Provide Description: N/A

(1) If toxicity testing data are reported for any project other than permit compliance testing, mark "yes" and identify the reason that toxicity data are being submitted, e.g., Consent Order, ambient monitoring, mixing zone evaluation.

This Page Last Edited By: Tiffany Weeks on: 05/07/2008

G	0, 6.25, 12.5, 25, 50, 100	5 days	MS	0.025 mL of 1200 Artemia nauplii/0.1 mL per replicate	Once daily	1000 mL	200 mL	Beaker	10	2	24-25
G	0, 6.25, 12.5, 25, 50, 100	14 days	SS	0.1 mL of 1200 Artemia nauplii/0.1 mL per replicate	Once at renewal	1000 mL	250 mL	Beaker	10	2	25

G. Other: 48 -Hr/Renewal/Multi-Concentration

Temperature Readings Were: N/A Single N/A Multiple X Continuous

Description of Control Water: Synthetic Seawater (Deionized water + HW Marinemix)

Photoperiod During Test: 16 Hrs. Light : 8 Hrs. Dark

SDS	04/29/2008-05/03/2008	MS	In-House	17.68 mg/L SDS
SDS	04/29/2008-05/03/2008	SS	In-House	7.51 mg/L SDS

(1) Please fill the "Type of Test" Box with the Appropriate Letter:
- A. 48-Hr/Non-Renewal/Single Concentration (Screen)
- B. 48-Hr/Non-Renewal/Multi-Concentration (Definitive)
- C. 96-Hr/Renewed Every 48-Hrs/Single Concentration (Screen)
- D. 96-Hr/Renewed Every 48-Hrs/Multi-Concentration (Definitive)
- E. 7-Day Chronic/Single Concentration (Screen)/Renewed Daily
- F. 7-Day Chronic/Multi-Concentration (Definitive)/Renewed Daily
- G. Other - Describe in the "G" Box

(2) List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%)

(3) Write Appropriate Letters for the following species in this column:
- CD Ceriodaphnia dubia
- FM Pimephales promelas (fathead minnow)
- SS Menidia beryllina (inland silverside)
- MS Mysidopsis bahia (mysid shrimp)
- DP Daphnia pulex
- DM Daphnia magna
- CL Cyprinella leedsi (bannerfin shiner)
- Other - Please Describe _____

(4) Attach all reference toxicant raw data and control charts for each organism/reference toxicant used for the test.

QA/QC Officer/Reviewer: Signature [signature] Date: 5/19/08

MS-Control	0	.....	.....	.....	0	.....
MS	6.25, 12.5, 25, 50, 100	080443-1	.....	.....	.....	100%*
.....	.....	.....	.....	.....	.....	.....
SS-Control	0	.....	.....	.....	0	.....
SS	6.25, 12.5, 25, 50, 100	080443-1	.....	.....	.....	100%*
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
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.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....

(1) List % control mortality in appropriate column (48 or 96 hr) for organisms (use abbreviations shown on footnote 3, Page 2) that you list under the word "Control."

(2) List all concentrations of effluent used (i.e., 0%, 6.25%, 12.5%, 25%, 50%, 100%).

(3) Record number that corresponds with the number of the sample in the "Date and Time Collected" column in sample section on Page 1.

(4) List % Mortality for each organism and control if you are conducting a single concentration (Screen) test.

--	----
--	----
--	----
--	----

(5) If multi-concentration (Definitive) tests are conducted on grab or composite samples, record the calculated LC50 in this column for each sample. Enter "N/A" in all % Mortality columns and LC50 box at bottom of this table.

(6) If a single concentration (Screen) test is conducted and >50% mortality occurs in any one of the four grab or composites, record <100% in this box. If <=50% mortality occurs in all four grabs or composites, record >100% in this box. Draw a line through the LC50 column in above table.

F = Flagged data, see page 5.

* No statistical test was used in endpoint determination as the data either did not appropriately fit the requirements of any point estimate techniques presented in EPA/600/4-90/027F or these methods provided an unrealistic or unreliable result as demonstrated herein.

QA/QC Officer/Reviewer: Signature [signature] Date: 5/19/08

Improper container	No
36-hour holding time exceeded	No
Temperature above 6 degrees Celsius	No

All calculated statistical endpoints were calculated using ToxCalc version 5.0.21 - Tidepool Scientific Software.

The results contained in this report relate only to the items tested or to the samples as received by the laboratory. MBL certifies the results contained in this report meet NELAC standards.

This report shall not be reproduced except in full, without the written approval of MBL.

QA/QC Officer/Reviewer: Signature

Date: 5/19/08

SURVIVAL BENCH SHEET

Project #: 080443 **Test Start:** 4/29/08 1617

Test Organism: Mysidopsis bahia **Test End:** 5/1/08 1555

Organism Age: 5 days **Brood #:** MS 080424

Concentration %	Sample Number	Survival: Replicate A					Survival: Replicate B					A & B %
		0 Hours	24 Hours	48 Hours	72 Hours	96 Hours	0 Hours	24 Hours	48 Hours	72 Hours	96 Hours	
100	080443-1	10	10	10			10	10	10			100
50		10	10	10			10	10	10			100
25		10	10	10			10	10	10			100
12.5		10	10	10			10	10	10			100
6.25		10	10	10			10	10	10			100
Control		10	10	10			10	10	10			100
Organisms Fed AM		--	--	--			--	--	--			--
Organisms Fed PM		SS 1639	SS 1700	--			SS 1639	SS 1700	--			
0 Hours started/checked by:		AM	AM	AM			AM	AM	AM			AM
24, 48 Hours counted by:												

Comments or Corrections:

Reviewed by: [illegible]

Date: 5/5/08

STATIC RENEWAL ACUTE TOXICITY TEST
PHYSICAL AND CHEMICAL MEASUREMENTS

Project #: 080443 **Test Start:** 4/29/08 1617

Test Organism: Mysidopsis bahia **Test End:** 5/1/08 1555

Effluent Concentration %	Sample Number	Dissolved Oxygen (mg/L) 0 Hours	24 Hours	48 Hours	pH 0 Hours	24 Hours	48 Hours
100	080443-1	6.6	5.9 / 6.7	5.9	8.1	7.8 / 8.2	7.8
50.0	↓	6.6	6.0 / 6.6	5.8	8.0	7.7 / 8.1	7.8
25.0	↓	6.6	6.2 / 6.6	5.7	8.0	7.7 / 8.0	7.7
12.5	↓	6.6	6.2 / 6.6	5.7	8.0	7.7 / 8.0	7.7
6.25	↓	6.6	6.2 / 6.6	5.8	8.0	7.7 / 8.0	7.8
Control	—	6.6	6.2 / 6.6	6.0	8.0	7.7 / 8.0	7.8
Measured by:		AM	SK / AM	SK	AM	SK / AM	SK

Effluent Concentration %	Sample Number	Temperature (Degrees Celsius) 0 Hours	24 Hours	48 Hours	Salinity 0 Hours	24 Hours	48 Hours
100	080443-1	25	25 / 25	24	36.6	38.0 / 36.6	38.3
50.0	↓	25	25 / 25	24	36.6	38.0 / 36.5	38.2
25.0	↓	25	25 / 25	24	36.6	38.1 / 36.6	38.1
12.5	↓	25	25 / 25	24	36.7	38.3 / 36.6	38.3
6.25	↓	25	25 / 25	24	36.7	38.3 / 36.6	38.2
Control	—	25	25 / 25	24	36.7	38.4 / 36.6	38.1
Measured by:		AM	SK / AM	SK	AM	SK / AM	SK

Comments or corrections:

Reviewed by: [illegible]

Date: 5/5/08

SURVIVAL BENCH SHEET

Project #: 080443 **Test Start:** 4/29/08 1617

Test Organism: Menidia beryllina **Test End:** 5/1/08 1557

Organism Age: 14 days **Brood #:** ~~S~~080415

Concentration %	Sample Number	Survival: Replicate A					Survival: Replicate B					A & B %
		0 Hours	24 Hours	48 Hours	72 Hours	96 Hours	0 Hours	24 Hours	48 Hours	72 Hours	96 Hours	
100	080443-1	10	8	8			10	10	10			90
50	↓	10	10	10			10	10	10			100
25	↓	10	9	9			10	9	9			90
12.5	↓	10	9	10			10	10	9			95
6.25	↓	10	10	10			10	9	9			95
Control		10	10	10			10	10	10			100
Organisms Fed AM		–	SS 0820	–			–	SS 0820	–			–
Organisms Fed PM			–	–				–	–			
0 Hours started/checked by: / 24, 48 Hours counted by:		SK / PM	PM	PM			SK / PM	PM	PM			PM

Comments or Corrections:

Reviewed by: gw

Date: 5/5/08

STATIC RENEWAL ACUTE TOXICITY TEST
PHYSICAL AND CHEMICAL MEASUREMENTS

Project #: 080443 **Test Start:** 4/29/08 1617

Test Organism: Menidia beryllina **Test End:** 5/1/08 1555

Effluent Concentration %	Sample Number	Dissolved Oxygen (mg/L)			pH		
		0 Hours	24 Hours	48 Hours	0 Hours	24 Hours	48 Hours
100	080443-1	6.6	5.4 / 6.7	5.6	8.1	7.8 / 8.2	7.8
50.0	↓	6.6	5.4 / 6.6	5.7	8.0	7.8 / 8.1	7.8
25.0	↓	6.6	5.4 / 6.6	5.6	8.0	7.7 / 8.0	7.7
12.5	↓	6.6	5.3 / 6.6	5.6	8.0	7.7 / 8.0	7.7
6.25	↓	6.6	5.3 / 6.6	5.6	8.0	7.7 / 8.0	7.7
Control	—	6.6	5.5 / 6.6	5.7	8.0	7.7 / 8.0	7.7
Measured by:		AM	SK / AM	SK	AM	SK / AM	SK

Effluent Concentration %	Sample Number	Temperature (Degrees Celsius)			Salinity		
		0 Hours	24 Hours	48 Hours	0 Hours	24 Hours	48 Hours
100	080443-1	25	25 / 25	25	36.6	37.9 / 36.6	38.0
50.0	↓	25	25 / 25	25	36.6	37.7 / 36.5	37.8
25.0	↓	25	25 / 25	25	36.6	37.7 / 36.6	37.7
12.5	↓	25	25 / 25	25	36.7	37.8 / 36.6	37.9
6.25	↓	25	25 / 25	25	36.7	37.9 / 36.6	38.0
Control	—	25	25 / 25	25	36.7	37.8 / 36.6	37.7
Measured by:		AM	SK / AM	SK	AM	SK / AM	SK

Comments or corrections:

Reviewed by: [illegible]

Date: 5/5/08

SAMPLE/CONTROL WATER INFORMATION

Project #: 080443

Control Water and Sample Analysis

	Laboratory Number	Alkalinity (mg/L)	pH	Hardness (mg/L)	pH	Chlorine (mg/L)	pH	Solid (mg/L)	Date	Initial
Initial Sample Analysis	080443-1	—				0.01	41306	M	65.3	4/28/08 MA
Control Water Initial	080428-6								16.36.7	4/28/08 MA
Control Water Renewal	080428-1								16.36.6	4/28/08

*Conductivity values indicated at a reference temperature of 25 degrees Celsius. Values in this column for salt-control water, 6‰ minimum, are for salinity determined at the time of initial use in the test.

Sample Aeration

Sample #	Initial DO (mg/L)	Aeration Rate (L/min)	Aeration Time (min)	Final DO (mg/L)	Initiated by (Initials/Date/Time/Method)		Initial Sample	
080443-1	7.0	3	~500	6.6	MA 4/29/08	1555/136	8.2	MA
080443-1	6.7	N/A	N/A	N/A	MA 4/30/08	1575	8.2	MA

Comments or corrections:

Reviewed by: [illegible]

Date: 5/5/08

ACUTE TEST CONDITIONS

Project #: 080443 **Client:** Alchem Laboratory

Test type: MS, SS 48 hr @ def. **Test run in Environmental Chamber #:** 2

Species Code (1)	Receipt Date and Supplier of Organism (if commercially obtained)	Init.	Amount & Type of Food (2)	Init.	How Often Fed (3)	Init.	Test Chamber Vol. (mL)	Init.	Vol. of Effluent Used (mL)	Init.	Type of Chamber (4)	Init.
MS	N/A	M	D	SS	D	SS	2 liters	M	250	M	B	M
SS	N/A	M	C	SS	B	SS	1 liter	M	250	M	B	M

(1) CD *Ceriodaphnia dubia*
FM *Pimephales promelas* (fathead minnow)
SS *Menidia beryllina* (inland silverside)
MS *Mysidopsis bahia* (mysid shrimp)
DP *Daphnia pulex*
DM *Daphnia magna*
CL *Cyprinella leedsi* (bannerfin shiner)
Other - Please Describe _____

(2) Please fill the "Amount & Type of Food" Box with the appropriate letter.
'AA' 0.1 mL Selenastrum per replicate, 0.1 mL YCT per replicate
'A' 0.2 mL Selenastrum per replicate, 0.2 mL YCT per replicate
'B' 1.4 mL Selenastrum/200 mL of sample, 1.4 mL YCT/200 mL of sample
'C' 0.1 mL conc. Artemia nauplii
'D' 0.085 mL of 1200 Artemia nauplii/0.1 mL per replicate
'E' 0.04 mL of 1200 Artemia nauplii/0.1 mL per replicate
'O' Other _____

(3) Please fill the "How Often Fed" box with the appropriate letter:
'R' Once, at least two hours before renewal
'D' Once daily
'T' Twice daily
'O' Other _____

(4) Please fill the "Type of Chamber" box with the appropriate letter:
'B' Plastic Beaker
'M' Plastic Medicine Cup
'P' Plastic Cup
'G' Glass Beaker
'C' Plastic Container
'O' Other _____

Photoperiod: [M] 16 hours Light/8 hours dark
[—] Other —

Test(s) conducted in accordance with EPA-821-R-02-012

Randomization version: 11

Method number _____

Physical and Chemical Measurement Equipment

Equipment type	Test start	24 hours	48 hours
Thermometer (A)	C	C/C	C
DO Meter (B)	5	5/5	5
pH Meter (C)	7	7/7	7
Conductivity meter (D)	10	10/10	10
Freshwater cond checked by	—	—	—
Used by (Initials)	M	SK/M	SK

(A) Thermometer number is the serial number or designated number on thermometer.
(B) DO Meters: "3" Orion 830; "4" Hach Sension 6; "5" Orion 830A; "6" Orion 820
(C) pH Meters: "7" Hach Sension 2; "8" Orion 290A; "9" Orion 720
(D) Conductivity: "10" Orion 160; "11" Orion 126
"O" Other _____

Comments or Corrections: _____

Reviewed by: [signature]

Date: 5/5/08

ALCHEM LABORATORY
ALTOL CHEMICAL ENVIRONMENTAL LABORATORY, INC.
SABANETAS INDUSTRIAL PARK - PONCE, PR
P.O. BOX 359 • MERCEDITA, PR 00715
TELS. (787) 848-6050 • (787) 848-6085 • (787) 848-6265
FAX (787) 848-6299

CSI ISO 9001

CUSTODY # 37667

Customer Name: FOMOD
Customer Signature: [signature]
Project: Daguao NPDES
Sample Type (No. of Cont.) Grab 1 Composite _____ Turn Around Time _____
Sample Matrix: Liquid X Solid ____ Sludge ____ Oil ____
Containers: Sterile ____ Plastic X Glass ____ Vials ____ Others ____
Preservative: (A) Ice (D) Na OH (G) Ascorbic Acid (J) Other
(B) H_2SO_4 (E) HCL (H) Zinc Acetate
(C) HNO_3 (F) Sodium Thiosulfate (I) FAS

Lab. Sample No.	Date	Time	Sample Description
08-2794	04/28/08	845	Composite
	—	—	Sen Wastewater
HBlue	08344-3-1		
Arrival	temp 6°C		
Delivered	on wet ice	via UPS	
12 9A6	35R 01 6968	8300	

___Acidity (A)	___Res. Chlorine (A)	___Sulfite (A)	___Gold (A)	___Zinc (A,C)
___Alkalinity (A)	___Hardness (A,C)	___Surfactant (A)	___Iron (A,C)	___Ignitability (A)
___Ammonia (A,B)	___Iodide (A)	___TKN (A,B)	___Lead (A,C)	___Corrosivity (A)
___Asbestos (A)	___Moisture (A)	___TOC (A,B)	___Manganese (A,C)	___Reactivity (A)
___Bicarbonate (A)	___Nitrate (A)	___Turbidity (A)	___Magnesium (A,C)	___Metals_TCLP (A)
___BOD-5 (A)	___Nitrite (A)	___Aluminum (A,C)	___Mercury (A,C)	___Volatiles_TCLP (A)
___Bromide (A)	___Nitrate & Nitrite (A)	___Antimonium (A,C)	___Molybdenum (A,C)	___Semi-Volatiles_TCLP (A)
___Carbonate (A)	___Oil & Grease (A,B)	___Arsenic (A,C)	___Nickel (A,C)	___Pesticides_TCLP (A)
___Chloride (A)	___Ortho Phosphate (A)	___Barium (A,C)	___Potassium (A,C)	___Herbicides_TCLP (A)
___COD (A,B)	___Phenol (A,B,I)	___Beryllium (A,C)	___Selenium (A,C)	___Benzene_TCLP (A)
___Coliform (F/T) (A,F)	___Phosphorous Total (A,B)	___Bismuth (A,C)	___Silicon (A,C)	___BTEX (A,E)
___Color ADMI (A)	___Set. Solids mg/L (A)	___Boron (A,C)	___Silver (A,C)	___PCB'S (A)
___Color Pt-Co (A)	___Set. Solids ml/L (A)	___Cadmium (A,C)	___Sodium (A,C)	___TOX (A)
___Conductivity (A)	___Solids Total (A)	___Calcium (A,C)	___Strontium (A,C)	___TTO (A,E)
___Cyanide (A,D,G)	___Suspended Solids (A)	___Chromium (A,C)	___Thallium (A,C)	___Dioxin (A)
___Fluoride (A)	___Silica (A)	___Chromium VI (A,C)	___Tin (A,C)	X Other ___
___pH (A)	___TDS (A)	___Cobalt (A,C)	___Titanium (A,C)	___TPH { Oil___ Diesel___ Gas___ }
___Temp. (A)	___Sulfate (A)	___Copper (A,C)	___Vanadium (A,C)	
___D.O. (A)	___Sulfide (D,H)		___Lithium (A,C)	

Comments: Toxicidad
Sen Wastewater Temp 4°C

Sample collected by: (Signature)	Relinquished by:	Date: Time:	Received by:	Date: Time:	Relinquished by: Date: Time:
[signature]	[signature]	04/28/08 830	[signature]	—	
Received by:	**Date: Time:**	**Delivery To Lab. by:**	**Date: Time:**	**Received at Lab by:**	**Date: Time:**
—	—	[signature]	4/28/08 1000	[signature]	4/28/08 10:00

PROCEDURE NO: ALGAP008 All Analyses will be performed following EPA approved methods unless otherwise specified by the client.

Received by [signature] Relinquished UPS 4/29/08 1235
Relinquished [signature] Received by [signature] 4/29/08 1245

INTERNAL CHAIN OF CUSTODY
MARINCO BIOASSAY LABORATORY, INC.
Acute Toxicity Test

Project # 080443

Sample expiration date/time 4/29/08 2045

Sample #(s)	080443-1	080443-1
Sample(s) checked in by Initials/Date/Time	Dy 4/29/08 1245	N/A
Sample(s) warmed by Initials/Date/Time	Dy 4/29/08 1538	Dy 4/30/08 1515
Total Residual Chlorine measured by Initials/Date/Time	Dy 4/29/08 1544	N/A
Sample(s) salted to test salinity using HW Marinemix by: Initials/Date/Time	N/A	N/A
Dilutions prepared by: Initials/Date/Time	SK 4/29/08 1605	Dy 4/30/08 1528
Test Start-test started by: Test renewal-test renewed by: Initials/Date/Time	Dy 4/29/08 1617 (HS) SK 4/29/08 1617 (SS)	Dy 4/30/08 1552
Remaining sample(s) returned to refrigerator by: Initials/Date/Time	Dy 4/29/08 1552	N/A
Samples disposed of by & disposal method Initials/Date/Time	N/A	Sample consumed in test Dy 4/30/08 1528

All samples are stored in the laboratory refrigerator from just above freezing to 6 degrees Celsius unless noted on this Internal chain of custody.

Comments:

Reviewed by: TW Date: 5/5/08